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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/648,973

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EXAMINER

AMRANY, ADI

ART UNIT

PAPER NUMBER

2836

MAIL DATE

DELIVERY MODE

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary**

Application No.

10/648,973

Applicant(s)

JOHNSON, LARRY L.

Examiner

Adi Amrany

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 22 June 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 6-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 6-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Response to Arguments*

1. Applicant's arguments with respect to claim 6 have been considered but are moot in view of the new ground of rejection. This final rejection is provided in response to the amendment of 19 October 2006 in order to clarify the obvious rejection, specifically with respect to the housing of the rectifier and super capacitor.

The limitation of "housed together" is rejected as obvious in view of established case law and the Shimamori patent from applicant's Information Disclosure Statement. Generally, changing the number of electrical components in a housing is obvious where the grouping of components does not affect their performance. One skilled in the art can readily divide a collection of components into different groups on circuit boards, such that removing one board includes removing a set of components without the need to remove each component individually.

In response to applicant's arguments contained in the Appeal Brief (see page 8, second and third paragraphs), the Examiner maintains that a paired rectifier/filter arrangement is a rectifier/capacitor device. A super capacitor is a capacitor, and it would be obvious to one skilled in the art to switch between the two components depending on the power requirements and size constraints. The Jungreis '593 capacitors 12-1 and 12-2 are not cited in the rejection, as they have no equivalent in applicant's claims. Claim 6 does not require that the rectifier/super capacitor devices be in parallel with one load such that they form redundant or backup current paths. The claim recites that the AC power source is at least one generator. Therefore, the claim is

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interpreted as reciting a plurality of generators feeding a plurality of rectifier/capacitor devices. Such a configuration is clearly shown in Jungreis.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 6 and 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jungreis (US 6,184,593) in view of Shimamori (US 5,737,202) and Jungreis (US 6,541,940).

With respect to claim 6, Jungreis '593 discloses a power supply system comprising:

an AC power source (figs 3 and 4, item 10; col. 3, lines 4-5); and  
a plurality of individual rectifier/super capacitor devices (items DR1-DRn+2, F1-Fn+2; col. 3, lines 4-5, 33-40), each device including a rectifier and a super capacitor together (col. 1, line 65 to col. 2, line 5, "in combination");

wherein each of said individual rectifier/super capacitor devices also includes at least three connection points (figure 4) to which other devices may be coupled, the first connection point coupled internally to a rectifier AC input, the second connection point coupled internally to a rectifier DC output and a first side of said super capacitor, and the third connection point coupled internally to a second side of said super capacitor;

wherein said AC power source is at least one microturbine generator (item 20b; col. 2, lines 58-59) operable to produce AC electrical power and adapted to be powered by a fuel.

The three connection points are shown in figure 4. At the time of the invention by applicant, it would have been obvious to utilize the power supply system disclosed in '593 with the telecommunications facility disclosed in '940. The motivation for doing so would have been to supply uninterruptible power to an electricity dependent utility service provider. Further, it would have been obvious to utilize super capacitors in the Jungreis systems, as it is well known in the art that super capacitors are capacitors that are designed to comprise a higher energy density.

Jungreis '593 discloses that the rectifiers (Dr) and capacitors (f) are "in combination" (col. 1, line 65 t col. 2, line 5; claim 1). One skilled in the art would recognize that rectifiers and capacitors are commonly paired in order to provide a smoother DC output voltage. A rectifier without a filter would output a sine wave (only the positive values) that is clearly unsuitable for a DC circuit. Coupling a capacitor to the rectifier smoothes out the "humps" to create a more stable DC voltage. The ripples of this DC voltage are a function of the capacitance of the filter used with the rectifier. Since these two components are commonly (if not always) placed together, it would be obvious to one skilled in the art to "house" them together since it has been held that forming in one piece an article which has formerly been formed in two piece and put together involves only routine skill in the art. *Howard v. Detroit Stove Works*, 150 U.W. 164 (1893).

Further, the housing does not improve the performance of the rectifier/capacitor device (specification, par 24). It appears that the housing only allows a user to remove the paired components as one unit. As discussed above, a rectifier and capacitor are commonly paired, and it would be obvious to one skilled in the art to consider the two components as a single device. It would have been obvious to one skilled in the art to house a rectifier and capacitor together, since it has been held that making an old device portable or movable without producing any new or unexpected results involves only routine skill in the art. *In re Lindberg*, 93 USPA 23 (CCPA 1952).

Lastly, it would have been obvious to alter the dimensions of the rectifier housing to include the paired capacitor, since such a modification would have involved a mere change in the size of a component. A change in size is generally recognized as being within the level of ordinary skill in the art. *In re Rose*, 105 USPQ 237 (CCPA 1955).

Shimamori discloses a power supply system (fig 10; col. 2, lines 12-37) comprising an AC power source (item 4) and a plurality of individual rectifier/capacitor devices (items 15, 17) housed together. Shimamori discloses that in order to reduced the overall size of the AC/DC converter, the DC/DC converter is removed and placed on an integrated circuit, which leaves the rectifier and capacitor together in the remaining unit ("housing").

Jungreis and Shimamori are analogous because they are from the same field of endeavor, namely power distribution systems. At the time of the invention by the applicant, it would have been obvious to one skilled in the art to combine the power

supply system disclosed in Jungreis with the housing disclosed in Shimamori in order to reduce the size and complexity of the AC/DC converter circuit.

Jungreis '593 does not expressly disclose the power supply system provides electrical power to a telecommunications facility. Jungreis '940 discloses a power supply system for providing reliable electrical power to a telecommunications facility (col. 1, lines 45-59), said facility containing telecommunications equipment. Jungreis '593 and '940 and Shimamori are analogous because they are from the same field of endeavor, namely power distribution systems. At the time of the invention by applicant, it would have been obvious to apply the '593 and Shimamori power supply system to the '940 telecommunications facility in order to supply uninterrupted voltage to a load that requires continuous power.

With respect to claim 11, Jungreis '593 further discloses said AC power source is a commercial electric utility (col. 1, lines 11-12).

With respect to claim 12, Jungreis '593 further discloses a first switching mechanism (fig 2, items S2; col. 1, lines 25-37) that is operable either to couple at least one microturbine generator to said first connection point or to couple a commercial electric utility to said first connection point.

4. Claims 7-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jungreis ('593 and '940), in view of Shimamori and Welches (US 6,404,655).

With respect to claim 7, Jungreis does not expressly disclose said fuel for said at least one microturbine generator is natural gas. Welches discloses a microturbine generator powered by a gas turbine (col. 10, lines 4-7).

Jungreis, Shimamori and Welches are analogous because they are from the same field of endeavor, namely AC power rectifiers. At the time of the invention by applicant, it would have been obvious to a person of ordinary skill in the art to combine the microturbine generator disclosed in Jungreis with the power distribution system disclosed in Jungreis and Shimamori with the gas disclosed in Welches. Further, it would be obvious to one skilled in the art that the gas turbine would be powered by natural gas. The motivation for doing so would have been because natural gas is a widely used combustible fuel.

With respect to claim 8, Jungreis and Welches disclose the system of claim 7, and further, it would be obvious to one skilled in the art that said natural gas is supplied by a commercial utility. Natural gas is commonly distributed by commercial utilities to customers through underground pipes.

With respect to claim 9, Jungreis discloses the system of claim 6, and Welches discloses the fuel for said at least one microturbine is propane. It would have been obvious to one skilled in the art to that the gas disclosed in Welches may comprise propane because propane is a widely used combustible fuel.

With respect to claim 10, Jungreis and Welches disclose the system of claim 9, and further, it would be obvious to one skilled in the art that said propane is stored on site. Propane gas is commonly delivered to consumers and stored in tanks.

### ***Conclusion***

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).



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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Adi Amrany whose telephone number is (571) 272-0415. The examiner can normally be reached on Mon-Thurs, from 10am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Sherry can be reached on (571) 272-2800 x36. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AA

  
8/15/07

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